

## **Abstract**

**Title:** Assessing Introductory Physics Students' Prior Knowledge of Physics Concepts

**Student:** Zahrah Aljuzayri

**DEGREE:** Masters of Arts in Education in Physics

**COLLEGE:** Science and Humanities

**DATE:** May 2013

**PAGE:** 69

The vast majority of learners have difficulty understanding their high school science and physics courses. Current modifications in high school graduation requirements now result in greater numbers of high school students graduating with some formal physics coursework. That experience might include a full year in a physics course, a half-year in a physical science course, or both. It is expected that these learners' involvement in high school with these topics will better help to prepare them when they enroll in college level physics. Nevertheless, the quality of their high school instruction and the knowledge gained may vary greatly. This study seeks to determine the extent to which university students taking introductory physics courses have retained knowledge of basic physics concepts that they may or may not have experienced in their high school preparation. The goal of this research is to test whether incoming BSU students who have completed a physics course or integrated chemistry and physics (ICP) in their high schools have an advantage over those who did not complete such a course. Data was collected through the use of a 72-question multiple-choice questionnaire that was used as a pretest. The study was given in one form to one hundred twenty-six introductory physics students. Results who took

high school physics or ICP did perform better on some questions than students who never took those classes, but worse on others.